



Meeting the New Challenges of International Interoperability

Steve Ewell
U.S. European Command
Executive Director J-6

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Combined Interoperability

- Interoperability not achieved by issuing common equipment to partners
- Interoperability is gained by continuously working to tie cultural, procedural, and technical and policy aspects of militaries and governments together
- Interoperability is not a single shot effort... nor can results be gained quickly
- Interoperability first about policy... then technology

Sharing in Afghanistan... *“how not to do it”...*

or better put... *“learning how to do it”*

Future coalitions will be little different...

ISAF coalition 50,000 strong made up of 40 nations, 14 non-NATO

- Reported 2500 NGOs working in Afghanistan
- Major command structures... bring diversity (*chaos?*)
 - NATO, U.S., and National networks
 - Predominant Networks
 - NATO Secret, ISAF Secret, NATO Unclassified, USA SIPRNET, USA NIPRNET, CENTRIXS
 - Telephones... > 100 different dialing procedures for calling within ISAF command structure

Diverse information sharing categories in ISAF

- NATO/ISAF Military and Civilian Personnel
- Coalition Forces Personnel
- NATO/ISAF contractors
- Local Contractors
- NON-ISAF Military and CIV personnel (ANSL, PAKMIL)
- International Community (NGO, UN, Red Cross)
- Others

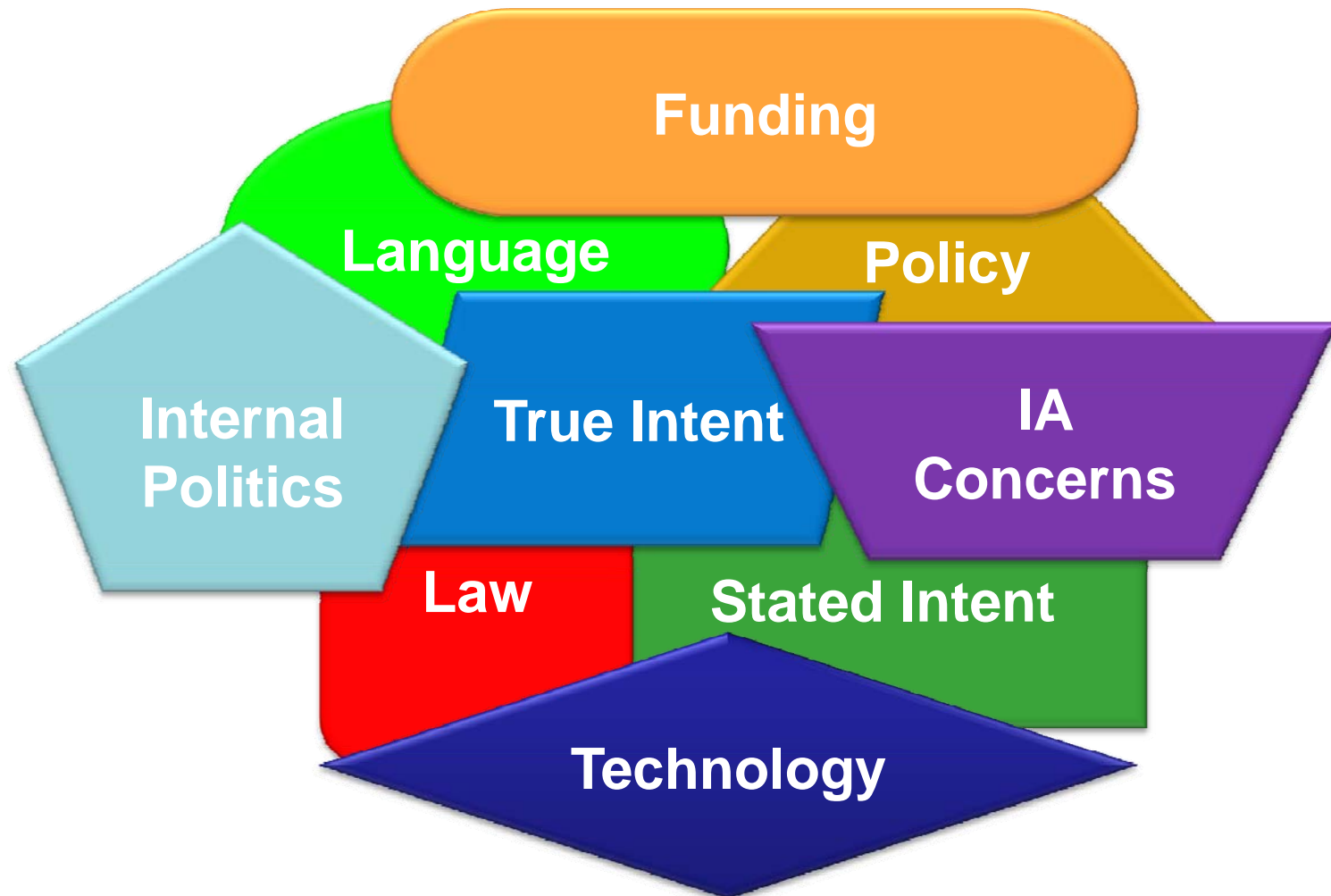
Disconnects

- Nations will bring divergent and non-compatible contributions
- Nations will guard their information and sources

Power of a networked environment is built on ability to share, and relies on that attribute to improve information and knowledge by collective processes and cross-fertilization

Interoperability... *it's Not Just for Geeks*

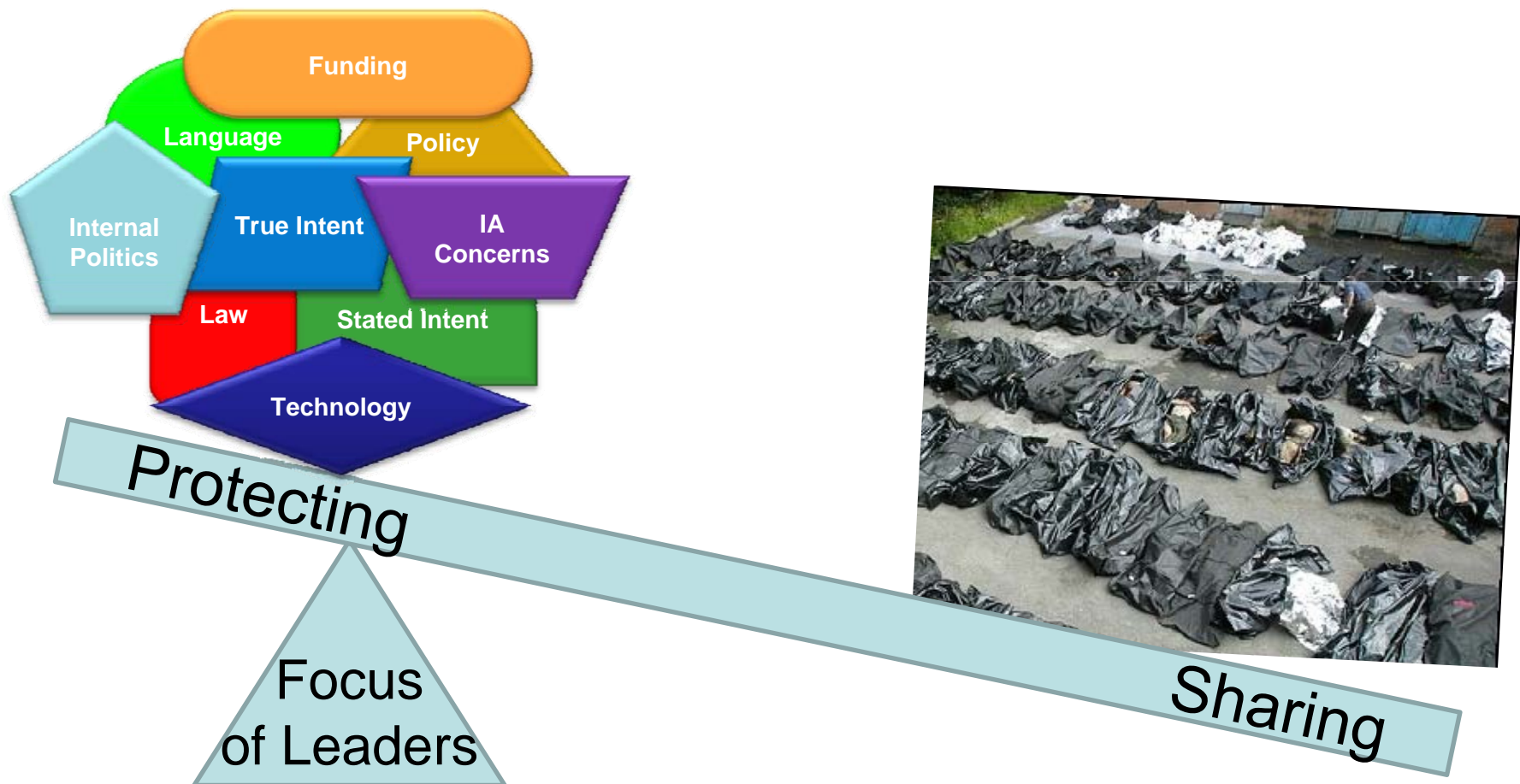
Reasons (Excuses) Not to Share



What Keeps You Awake at Night?

Excuses Win

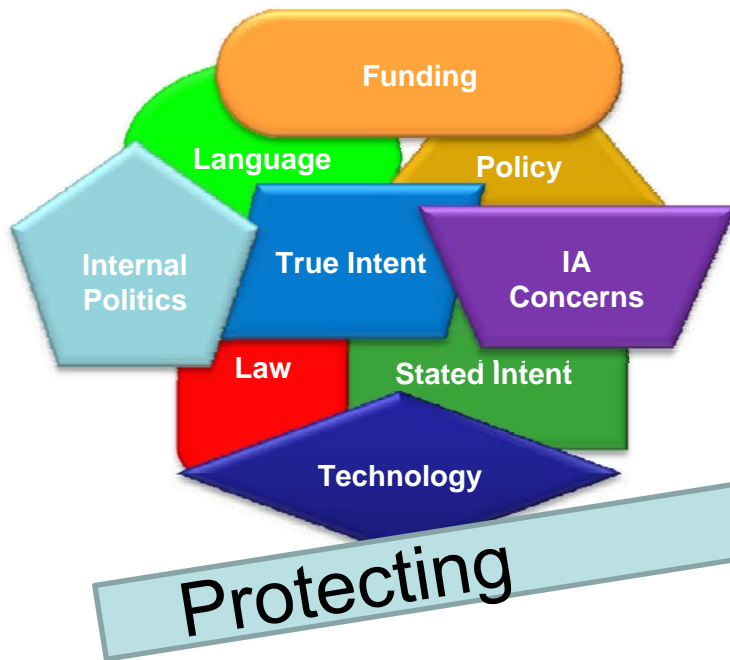
People Lose



What Keeps You Awake at Night?

Excuses Lose

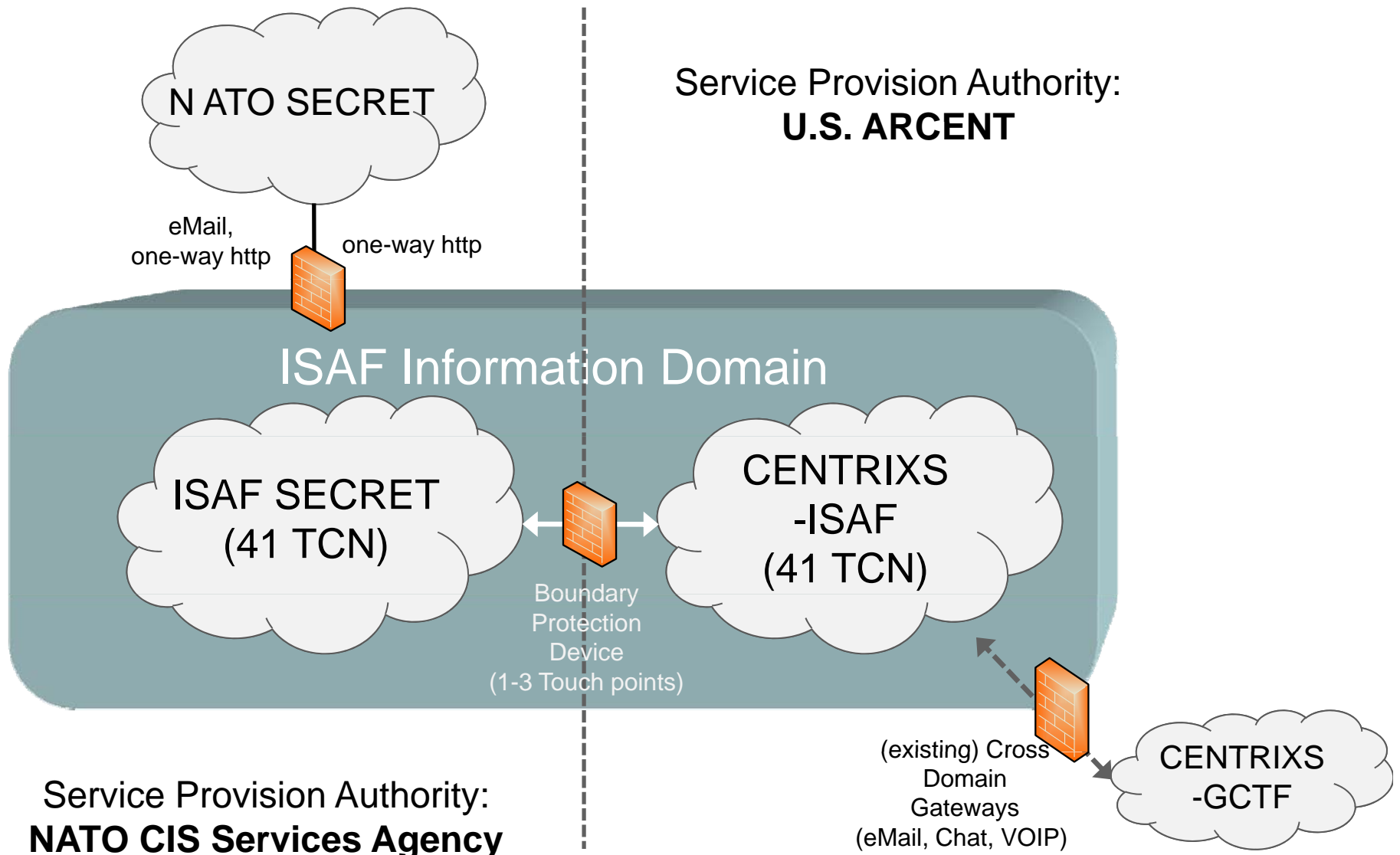
People Win



Sharing

**Focus
of Leaders**

Took the US over 3 years “to get it” in ISAF...
after too many fratricide incidents



Handling of Policy, Trust, and Sharing for Coalition Operations

Problem is shared by everyone...

“owned” by no one

What we say we are going to do... and what we are definitely not doing...

- Create an “agile architecture” of “composable capabilities” to enable commanders to share information among diverse stakeholders in dynamic and complex international environments
- Create an information sharing model to define a set of sustainable capabilities [services] to support a wide range of information exchanges among many mixes of missions, stakeholder groups, and sharing relationships (in the near term 1-5years)

“Primary goal is to ensure all capabilities are network enabled in a coherent manner... can only be realized if coherence can be achieved outside of the U.S.”

Who are the information sharing policy advocates...?

Interoperability and Information Sharing...

defining success...

Dependent on:

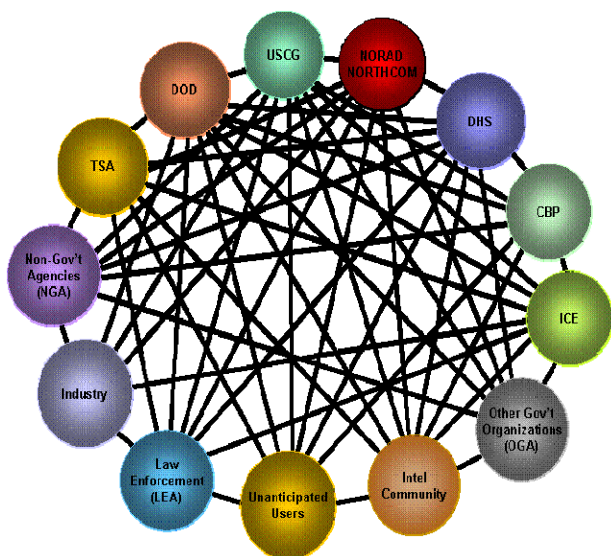
- Operational community taking ownership... *not just engineers*
 - Learning curve from IRAQ/Afghanistan has “fast tracked” new capabilities
 - *Still... not a good track record for clear operational input*
 - *Challenge is not unique to U.S. or NATO*
- Ability to effect organizational and policy change... accepted CONOPS
 - Within the DoD
 - Within NATO
 - Within Coalitions
 - Within Nations
 - With the Operational Community
 - With the Acquisition Community (Intl Stds induce risk & cost to PORs)

Understanding organizational change principles, social science, and ID'ing correct operational stakeholders...as important as technical solutions for Coalition OPS...

Our Changing Environment... *A Vision for Information Sharing*

Today

- “Mandate to share” vs “Need to protect” => DISCLOSURE
- Focus on:
 - US-centric connectivity, cryptos, guards, “secure vaults”
 - Highly structured point to point information exchanges
- Long lead times, low flexibility, limited functionality



Future

- Balanced risk management practices => SHARING
- Focus on:
 - Combined planning, operations, and decisions
 - Broad spectrum of often unanticipated users
- Agile, responsive capabilities that work at mission speeds



Why change is so important...

A New NATO... 21st Century Roles ⁽¹⁾ ...

Not so different from the U.S.

Home Missions

- Deterrence & Defense
- Transatlantic Resilience
- Europe Whole and Free at Peace

Away Missions

- Crisis Prevention and Response
- Stability Operations
- Working effectively with Partners

These mission share common requirements

- *Improved capabilities that are deployable*
- *Better synergy between NATO & partners, including NGOs*
- *Cooperation between Civil and Military authorities*
- *Requires allies match means to agreed upon missions*

(1) Alliance Reborn: An Atlantic Compact for the 21st Century
Atlantic Council
Center for Strategic and International Studies
Center for Technology and National Security Policy
Center for Transatlantic Relations

A New NATO... 21st Century Roles

Home Missions

- Deterrence & Defense
 - Military capability for NATO Response Force
 - First responder for Article V response
 - Out of area crisis response
 - Timely handover of national forces to NATO control
- Transatlantic Resilience
 - Guarding approaches
 - Counterterrorism
 - Enhancing early warning & missile defense
 - Consequence management
 - Cyber defense
 - Bio defense
- Europe Whole and Free at Peace
 - Create conditions for closer relations... to foster integration
 - Information Sharing between nations

A New NATO... 21st Century Roles

Away Missions

- Crisis Prevention and Response
 - Deeper pool of capable deployable forces
 - Force multipliers... ISR, agile, interoperable C2
- Stability Operations
 - Non traditional military operations
 - Terrorists, organized crime, ethnic violence, distributing basics needs, power, water, food, fuel, re-building police, governance, armies
- Working effectively with Partners
 - Train and build capacities of other countries
 - Multilateral training and Joint Commands
 - NATO to remain the primary vehicle to ensure interoperability between US and European forces

Handling of Policy, Trust, and Sharing for Coalition Operations

...remains the largest obstacle to an integrated operational architecture

Mission Assurance... and Information Assurance (What is Mission Assurance? Spurgeon Norman Jr., MITRE)

- Each operation has specific missions, assumptions constraints and COAs
- Particular mission actions cannot be predicted given variety of operations
- Risk management controls for each operation cannot be predicted in advance
- Ability to manipulate... even disregard controls is a factor between success and failure
- *New thought on information sharing policy?*

Give operator/warfighter control of protection mechanisms

- Operation Phase: Phase of operation dictates difference assurance controls
- Time/environment: Mission actions related to time & environment dictate assurance controls
- All Domains: Mission assurance considerations cut across all domains, combat support, intel, combat, SPECOPS
- Partner considerations: Multi-national and interagency drive assurance mechanisms

*Who is overseeing creation of systems and policies to “throttle” Policy, Trust, and Sharing?
Is it even being considered?*

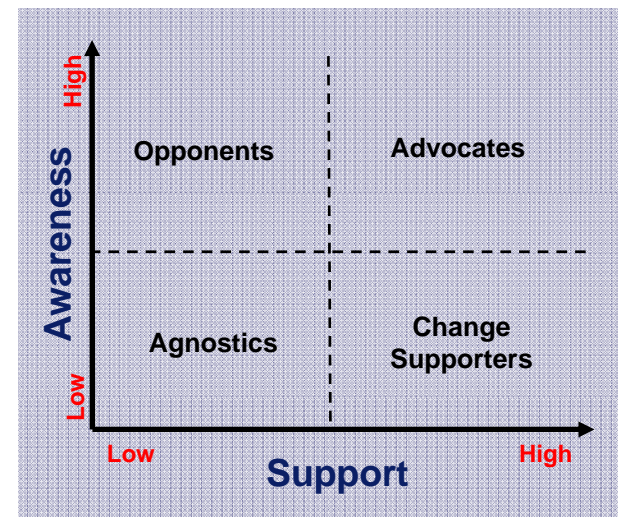
Coalition Interoperability Change Agents...?

We all are... Services, Agencies, COCOMs, Program managers

Understanding Stakeholders' Attitudes Regarding Initiatives or Change

International Interoperability Challenge...

- Awareness of operational requirements
- Social science
 - Organizational and human relationships
- Multiple operational and policy demographics
 - Segment stakeholders into groups to facilitate influence
- Influencing Programs
 - Influence programs to adopt, buy or create composable capabilities with Intl Stds
- Influencing Policy
 - Evaluate and bound risks, demonstrate balance with mission sharing needs



“Largest obstacle... nations tend to be multi-domestic... not multi-national”

A Closing Thought

**We Must be WILLING and MOTIVATED to share,
even if by carrier pigeon...**

**Policy and CONOPS must be addressed
simultaneously with new technology...**